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Terms	Documents
4506086.pn. or 3454603.pn.	2

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Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L9

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Search History

DATE: Wednesday, February 26, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L9	4506086.pn. or 3454603.pn.	2	L9
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ			
L8	(1757468| 3454603| 4169152| 4506086| 4564645| 4564692| 4659846| 6288284)![pn]	15	L8
L7	(1757468| 3454603| 4169152| 4506086| 4564645| 4564692| 4659846| 6288284)![pn]	15	L7
L6	L5 and l4	4	L6
L5	549/$ or 568/$	97815	L5
L4	exchange resin and L3	7	L4
L3	L2 and catalyst	32	L3
L2	L1 and zeol$6	54	L2
L1	isosorbide or anhydrosugar alcohol	2743	L1

```
=> s anhydrosugar alcohol and dehydrat? and ino exchange resin
            88 ANHYDROSUGAR
        179272 ALCOHOL
             0 ANHYDROSUGAR ALCOHOL
               (ANHYDROSUGAR(W)ALCOHOL)
        123842 DEHYDRAT?
           766 INO
        484963 EXCHANGE
        501555 RESIN
             0 INO EXCHANGE RESIN
               (INO(W)EXCHANGE(W)RESIN)
L1           0 ANHYDROSUGAR ALCOHOL AND DEHYDRAT? AND INO EXCHANGE RESIN

=> s anhydrosugar alcohol and dehydrat? and ion exchange resin
            88 ANHYDROSUGAR
        179272 ALCOHOL
             0 ANHYDROSUGAR ALCOHOL
               (ANHYDROSUGAR(W)ALCOHOL)
        123842 DEHYDRAT?
        980308 ION
        484963 EXCHANGE
        501555 RESIN
         14814 ION EXCHANGE RESIN
               (ION(W)EXCHANGE(W)RESIN)
L2           0 ANHYDROSUGAR ALCOHOL AND DEHYDRAT? AND ION EXCHANGE RESIN

=> s isosorbide and dehydrat? and ion exchange resin
          2315 ISOSORBIDE
        123842 DEHYDRAT?
        980308 ION
        484963 EXCHANGE
        501555 RESIN
         14814 ION EXCHANGE RESIN
               (ION(W)EXCHANGE(W)RESIN)
L3           2 ISOSORBIDE AND DEHYDRAT? AND ION EXCHANGE RESIN

=> d 1-2 ibib abs hitstr

L3   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2001:816671  CAPLUS
DOCUMENT NUMBER:          135:344673
TITLE:                    Improved synthesis of anhydroglycitol esters of
                          improved color
INVENTOR(S):              Van Es, Daniel Stephan; Frissen, Augustinus Emmanuel;
                          Luitjes, Hendrikus
PATENT ASSIGNEE(S):       Instituut voor Agrotechnologisch Onderzoek (Ato-Dlo),
                          Neth.
SOURCE:                   PCT Int. Appl., 13 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2001083488      A1   20011108       WO 2001-NL342    20010504
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
             RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
             VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     NL 1015119         C2   20011106       NL 2000-1015119  20000504
```

EP 1278752 A1 2[redacted]129 EP 2001-928252 20[redacted]04
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.: NL 2000-1015119 A 20000504
WO 2001-NL342 W 20010504
OTHER SOURCE(S): CASREACT 135:344673
AB Diesters of dianhydroglycitols can be prepd. by esterification of dianhydroglycitols, anhydroglycitols and/or glycitols with alkylcarboxylic or arylcarboxylic acids in the presence of an acid catalyst, the acid catalyst being a macroporous acid **ion exchange resin**. If glycitols or monoanhydroglycitols are used as the starting material, the reaction temp. is initially of the order of 120 .degree.C and after the **dehydration** is approx. 140 .degree.C. Thus, esterification of **isosorbide** with n-octanoic acid in the presence of Amberlyst 15 resin gave **isosorbide** 2,5-di-n-octanoic acid in 98% yield.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:473028 CAPLUS
DOCUMENT NUMBER: 119:73028
TITLE: Preparation of heat- and/or alkali-stable sorbitan
INVENTOR(S): Kawashima, Shigeru; Amano, Yoichi; Takemura, Motohiro; Kato, Kazuaki
PATENT ASSIGNEE(S): Towa Kasei Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05017468	A2	19930126	JP 1991-196153	19910711
JP 3134203	B2	20010213		

PRIORITY APPLN. INFO.: JP 1991-196153 19910711
AB Heat- and/or alkali-stable sorbitan (I) is obtained by adjusting an aq. soln. of I to pH 8-14 with an alkali, heating it at 90-220.degree., and purifn. The heat-treated and purified I crystals and an aq. soln. thereof are not markedly colored during storage and concn. at room temp. or esterification with fatty acids. Thus, 7.1 kg of an aq. I soln. (Sorbit D-70) was concd. in vacuo at 100.degree.; H_2SO_4 (1 wt.% of I) was added; the mixt. was subjected to **dehydration** at 120.degree. for 90 min under an aspirator. The reaction mixt. was cooled to 60.degree.; a 200 g portion was dild. with warm (50.degree.) H_2O to 50% concn., adjusted to pH 10.6 with 20% aq. NaOH, and heated at 130.degree. for 30 min. The reaction mixt. was left to cool to 80.degree., stirred with activated charcoal (2 wt.% of the solid content of the soln.) for 15 min, filtered to remove the charcoal, and then passed through 300 mL of a mixed bed-type **ion exchange resin**. for deionization to give a product consisting of a solid contg. I 75.2, **isosorbide** 5.4, sorbitol 12.1, and other sugar alcs. 7.3%. When 60 g of a 50% soln. of the product was heated with 5 g 10% aq. NaOH for 30 min, the APHA color of the soln. was 20.

=>

```
=> s isosorbide/cn
L1            1 ISOSORBIDE/CN

=> d l1

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   652-67-5  REGISTRY
CN   D-Glucitol, 1,4:3,6-dianhydro- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Furo[3,2-b]furan, D-glucitol deriv.
CN   Glucitol, 1,4:3,6-dianhydro-, D- (8CI)
CN   Sorbitol, 1,4:3,6-dianhydro- (6CI)
OTHER NAMES:
CN   (+)-D-Isosorbide
CN   1,4:3,6-Dianhydro-D-glucitol
CN   1,4:3,6-Dianhydro-D-sorbitol
CN   1,4:3,6-Dianhydrosorbitol
CN   AT 101
CN   Devicoran
CN   Hydronol
CN   Ismotic
CN   Isobide
CN   Isosorbide
CN   NSC 40725
FS   STEREOSEARCH
DR   7241-88-5, 50974-60-2, 151380-60-8, 152881-21-5, 42750-75-4, 49871-92-3
MF   C6 H10 O4
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE,
       HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, PHARMASEARCH, PIRA,
       PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**, WHO
         (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.  Rotation (+).
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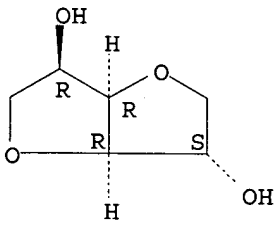


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

             335 REFERENCES IN FILE CA (1962 TO DATE)
              32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             335 REFERENCES IN FILE CAPLUS (1962 TO DATE)
              14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


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                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     6.70       7.33

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FILE COVERS 1907 - 27 Feb 2003 VOL 138 ISS 9
FILE LAST UPDATED: 26 Feb 2003 (20030226/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s 652-67-5/prep
           337 652-67-5
       2970869 PREP/RL
L2           59 652-67-5/PREP
                (652-67-5 (L) PREP/RL)

=> s l2 and vacuum distill? and melt crysta?
        286048 VACUUM
        101816 DISTILL?
          2561 VACUUM DISTILL?
                 (VACUUM(W)DISTILL?)
        262795 MELT
       1470852 CRYSTA?
           966 MELT CRYSTA?
                 (MELT(W)CRYSTA?)
L3           0 L2 AND VACUUM DISTILL? AND MELT CRYSTA?

=> s l2 and vacuum distill? and  crysta?
        286048 VACUUM
        101816 DISTILL?
          2561 VACUUM DISTILL?
                 (VACUUM(W)DISTILL?)
       1470852 CRYSTA?
L4           0 L2 AND VACUUM DISTILL? AND  CRYSTA?

=> s l2 and distill? and  crysta?
        101816 DISTILL?
       1470852 CRYSTA?
L5           0 L2 AND DISTILL? AND  CRYSTA?

=> s L2 and distill? and  crysta?
        101816 DISTILL?
       1470852 CRYSTA?
L6           0 L2 AND DISTILL? AND  CRYSTA?

=> s L2 and distill?
        101816 DISTILL?
L7           1 L2 AND DISTILL?

=> s L2 and  crysta?
       1470852 CRYSTA?
L8           7 L2 AND  CRYSTA?

=> s l7 or l8
L9           8 L7 OR L8

=> d 1-8 ibib abs hitstr

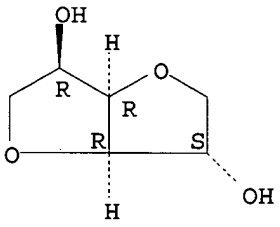
L9   ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2002:585158  CAPLUS
```

DOCUMENT NUMBER: 138:39
TITLE: The solvent-free thermal dehydration of hexitols on zeolites
AUTHOR(S): Kurszewska, Maria; Skorupowa, Eugenia; Madaj, Janusz; Konitz, Antoni; Wojnowski, Wieslaw; Wisniewski, Andrzej
CORPORATE SOURCE: Department of Chemistry, University of Gdansk, Gdansk, PL-80-952, Pol.
SOURCE: Carbohydrate Research (2002), 337(14), 1261-1268
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:39479

AB Dehydration of galactitol, D-glucitol and D-mannitol at high temp. in the presence of mol. sieves without solvent under an argon atm. is described. Cyclodehydration products with retention or inversion of the configuration at asym. carbon atoms, were obsd. Reaction of galactitol yielded racemic 1,4-anhydrogalactitol in a first step and then racemic 1,4:3,6-dianhydroiditol. Complete anal. sepns. of exhaustively O-acetylated reaction products were achieved by GC and structures were assigned using co-injection with stds.

IT **652-67-5P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(solvent-free thermal dehydration of hexitols using zeolites)
RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:462519 CAPLUS
DOCUMENT NUMBER: 137:54728
TITLE: Chiral dopants for induction of a variable helical pitch and their application in color reflective display
INVENTOR(S): Chuard, Thierry; Deschenaux, Robert; Klappert, Rolf; Meyer, Severine
PATENT ASSIGNEE(S): Asulab S.A., Switz.
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1215271	A1	20020619	EP 2000-204584	20001218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002114902	A1	20020822	US 2001-331	20011204
JP 2002241757	A2	20020828	JP 2001-384597	20011218

PRIORITY APPLN. INFO.: EP 2000-204584 A 20001218

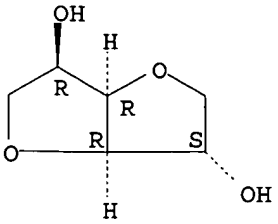
AB The invention relates to chiral dopants to induce the modification of the helical pitch of a cholesteric liq. **crystal** compn., wherein the

dopant has a chiral bifunc[redacted]nal group, which has a polymer[redacted]ble terminal group, by irradn. of light. The dopant is suitable for use in color reflective liq. **crystal** displays.

IT **652-67-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(chiral dopants for induction of a variable helical pitch and application in color reflective display)

RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:391474 CAPLUS
DOCUMENT NUMBER: 136:391093
TITLE: Chromatographic processes for recovery of isosorbide
INVENTOR(S): Dalziel, Sean Mark; Green, Daniel Albert; Zolandz, Raymond Richard
PATENT ASSIGNEE(S): E.I. Dupont De Nemours and Company, USA
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002039957	A2	20020523	WO 2001-US47136	20011106
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002035166	A5	20020527	AU 2002-35166	20011106

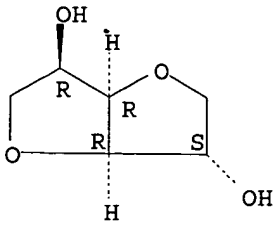
PRIORITY APPLN. INFO.: US 2000-246038P P 20001106
WO 2001-US47136 W 20011106

AB The present invention provides a process which will allow recovery of high yields of pure isosorbide from crude reaction mixts. More specifically, the instant invention demonstrates that isosorbide can be chromatog. sepd. to yield pure material, using com. strong-acid cation exchange resins.

IT **652-67-5P**, Isosorbide
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(chromatog. purifn. of isosorbide using ion exchangers)

RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

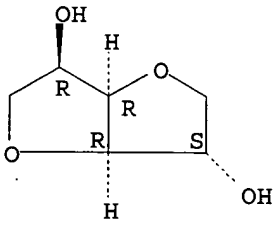


L9 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:333359 CAPLUS
DOCUMENT NUMBER: 129:54668
TITLE: Liquid **crystalline** poly(ester-amide)s containing chiral groups for second harmonic generation
AUTHOR(S): Maniram, K. A.; Sreekumar, K.
CORPORATE SOURCE: Department of Chemistry, University of Kerala, Trivandrum, 695581, India
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1998), 3321(Smart Materials, Structures, and MEMS), 67-71
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The synthesis, characterization and evaluation of optical properties of a series of new copoly(ester-amides) contg. donor-acceptor amino-nitro functionality and a chiral building unit are reported. The poly(ester-amides) are highly thermally stable, possess high Tg values and show liq. cryst. behavior over a wide temp. range. The optical purity of the polymers is maintained even at high temp. High temp. stability of the second harmonic generation efficiency was obsd. for the copolymers.

IT **652-67-5DP**, polymers with polyethylene glycol and diacid chloride
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**
(prepn. of liq.-cryst. polyamide-polyesters contg. isosorbide groups for second harmonic generation)
RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

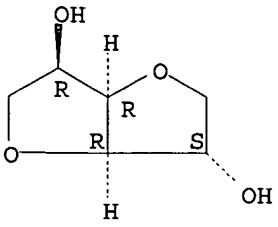


REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:713888 CAPLUS
DOCUMENT NUMBER: 127:331774
TITLE: "Sugar diols" as building blocks of polycondensates
AUTHOR(S): Kricheldorf, Hans R.
CORPORATE SOURCE: Institut fur Technische und Makromolekulare Chemie der Universitat, Hamburg, D-20146, Germany
SOURCE: Journal of Macromolecular Science, Reviews in Macromolecular Chemistry and Physics (1997), C37(4), 599-631
CODEN: JMSPDH; ISSN: 0736-6574
PUBLISHER: Dekker

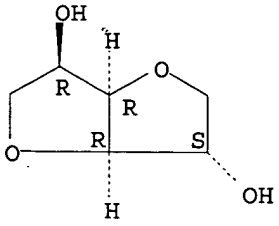
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 68 refs. on condensation polymers based principally on isosorbide, isoidide, and isomannide. Chiral polymers (including polyesters) and crosslinkable and linear cholesteric polymers are discussed.
IT **652-67-5DP**, Isosorbide, condensation polymers
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**; PROC (Process)
(prepn. and properties and processing of)
RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L9 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:84056 CAPLUS
DOCUMENT NUMBER: 116:84056
TITLE: Polyol conversions into furanic derivatives on bimetallic catalysts: copper-ruthenium, copper-platinum, and ruthenium-copper
AUTHOR(S): Montassier, C.; Menezo, J. C.; Moukolo, J.; Naja, J.; Hoang, L. C.; Barbier, J.; Boitiaux, J. P.
CORPORATE SOURCE: Lab. Chim., CNRS, Poitiers, 86022, Fr.
SOURCE: Journal of Molecular Catalysis (1991), 70(1), 65-84
CODEN: JMCADS; ISSN: 0304-5102
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 116:84056
AB Bimettalic catalysts were prepd. using two different techniques. Ru or Pt was deposited on Raney copper by oxido-redn. Deposited on charcoal was modified by Cu by catalytic redn. Aq. phase polyol conversions of (glycerol, erythritol, xylitol, glucitol) in the range 493-533 K under 4 MPa of hydrogen show that unsatd. intermediates resulting from dehydrogenation are irreversibly adsorbed on the surface of copper-based catalysts modified or not by Ru or Pt. C-C and C-O bond cleavages obsd. on Raney copper occur through the nucleophilic action of adsorbed hydroxyl groups. For surface at. ratios Ru or Pt to copper from 0-0.15, these reactions are deactivated due to the disappearance of surface hydroxyl groups. For surface at. ratios Ru or Pi to copper greater than 0.15, cyclodehydration reactions leading to furanic derivs. occur through an electron transfer from copper to the second metal, thus creating electrophilic copper. In the case of Ru modified by Cu, only the more active sites of Ru responsible for the multiple hydrogenolysis of C-C and C-O bonds are poisoned, part of the copper being deposited on the charcoal support. The remaining Ru not interacting with Cu retains a high activity for simple hydrogenolysis of C-C and C-O bonds.
IT **652-67-5P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(prepn. of)
RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L9 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:407594 CAPLUS
DOCUMENT NUMBER: 101:7594
TITLE: Pure **crystalline** anhydropentites, mono- and /or dianhydrohexites
INVENTOR(S): Feldmann, John; Koebernick, Hubert; Richter, Klaus; Woelk, Hans Ulrich
PATENT ASSIGNEE(S): Maizena G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 17 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

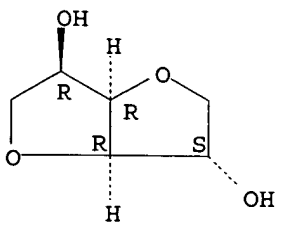
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3230349	A1	19840216	DE 1982-3230349	19820814
US 4564692	A	19860114	US 1983-514731	19830718
ZA 8305814	A	19840425	ZA 1983-5814	19830808
EP 106957	A1	19840502	EP 1983-107858	19830809
EP 106957	B1	19870318		
R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
FI 8302881	A	19840215	FI 1983-2881	19830810
FI 83653	B	19910430		
FI 83653	C	19910812		
DK 8303682	A	19840215	DK 1983-3682	19830812
BR 8304343	A	19840320	BR 1983-4343	19830812
ES 524921	A1	19840516	ES 1983-524921	19830812
CA 1247117	A1	19881220	CA 1983-434503	19830812

PRIORITY APPLN. INFO.: DE 1982-3230349 19820814

AB Anhydroalditols, e.g., 1,4:3,6-dianhydro-D-sorbitol, 1,4:3,6-dianhydro-D-mannitol, and 1,4-anhydro-D-sorbitol were obtained 99% pure by crystn. from aq. anhydroalditol mixts. Thus, 100 g of a mother liquor contg. 7.5 wt. % H2O and 66% 1,4-anhydro-D-sorbitol (dry wt.) was stirred 18 h. at 55.degree. and cooled to 30.degree. to give 36 g of 99% pure 1,4-anhydro-D-sorbitol contg. less than 0.5 % water.

IT **652-67-5P**
RL: PUR (Purification or recovery); **PREP (Preparation)** (purifn. of)
RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



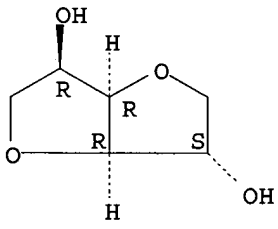
L9 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1972:14835 CAPLUS

DOCUMENT NUMBER: 76:148
TITLE: Preparation of 1,4:3,6-dianhydroglucitol
AUTHOR(S): Plucinski, Janusz; Durda, Wladyslawa; Sinicka, Stefania
CORPORATE SOURCE: Zak-. Podstawy Synt. Org., Politech. Wroclawska, Wroclaw, Pol.
SOURCE: Prace Naukowe Instytutu Technologii Organicznej i Tworzyw Sztucznych Politechniki Wroclawskiej (1971), No. 3, 3-14
CODEN: PNITAF; ISSN: 0370-0879
DOCUMENT TYPE: Journal
LANGUAGE: Polish

AB The compd. was prepd. by phosphoric or sulfuric acid dehydration of D-glucitol in boiling benzene, toluene or xylene. The best yield 83.1% of the **distilled** product was obtained when 1.5% of H3PO4 (to glucitol) and xylene were used. For sulfuric acid the best concn. was 1-1.5% but yields were not better than 72.1%.

IT **652-67-5P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(prepn. of)
RN 652-67-5 CAPLUS
CN D-Glucitol, 1,4:3,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



```
=> s anhydro sugar alcohols
          8935 ANHYDRO
        216120 SUGAR
        130046 ALCOHOLS
L14          3 ANHYDRO SUGAR ALCOHOLS
                 (ANHYDRO(W)SUGAR(W)ALCOHOLS)

=> s anhydro sugar alcohol
          8935 ANHYDRO
        216120 SUGAR
        179557 ALCOHOL
L15          0 ANHYDRO SUGAR ALCOHOL
                 (ANHYDRO(W)SUGAR(W)ALCOHOL)

=> d 1-3 l14 ibib abs hitstr

L14  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2001:886131  CAPLUS
DOCUMENT NUMBER:          136:6291
TITLE:                    Process for the manufacture of anhydro
                          sugar alcohols with the assistance
                          of a gas purge
INVENTOR(S):              Andrews, Mark Allen; Bhatia, Kamlesh Kumar; Fagan,
                          Paul Joseph
PATENT ASSIGNEE(S):       E.I. Dupont De Nemours and Company, USA
SOURCE:                   PCT Int. Appl., 14 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2001092266      A2   20011206       WO 2001-US16571  20010522
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     EP 1283840         A2   20030219       EP 2001-939271   20010522
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     US 2002028959      A1   20020307       US 2001-864465   20010524
PRIORITY APPLN. INFO.:                    US 2000-207715P  P  20000526
                                          WO 2001-US16571  W  20010522
OTHER SOURCE(S):          CASREACT 136:6291
AB   1This invention concerns a process for the manuf. of anhydro- and
     dianhydro- hexitols, pentitols, and tetritols by the dehydration of sugar
     alcs. (alditols) in the presence of a zeolite dehydration catalyst and
     with the assistance of an inert gas sparge.

L14  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2001:886098  CAPLUS
DOCUMENT NUMBER:          136:20218
TITLE:                    Continuous process for manufacture of anhydro
                          sugar alcohols and reactor useful
                          therefor
INVENTOR(S):              Bhatia, Kamlesh Kumar
PATENT ASSIGNEE(S):       E.I. Dupont De Nemours and Co., USA
SOURCE:                   PCT Int. Appl., 12 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
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FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092246	A2	20011206	WO 2001-US16662	20010522
WO 2001092246	A3	20020404		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002002291	A1	20020103	US 2001-864466	20010524
US 6407266	B2	20020618		

PRIORITY APPLN. INFO.: US 2000-207313P P 20000526
OTHER SOURCE(S): CASREACT 136:20218

AB Anhydro- and dianhydro- hexitols, pentitols, and tetritols are manufd. by dehydration of sugar alcs. (alditols) in the presence of a dehydration catalyst (e.g., H2SO4), wherein at least one sugar alc. is sorbitol and the product is isosorbide.

L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:175805 CAPLUS
DOCUMENT NUMBER: 132:194598
TITLE: Continuous process for the production of **anhydro sugar alcohols** via acid-catalyzed dehydration
INVENTOR(S): Brinegar, Willard C.; Wohlers, Michael; Hubbard, Michael A.; Zey, Edward G.; Kvakovszky, George; Shockley, Thomas H.; Roesky, Rainer; Dingerdissen, Uwe; Kind, Werner; Kohle, Norbert; Rieth, Jochen; Thomzigk, Manfred
PATENT ASSIGNEE(S): E.I. du Pont de Nemours and Company, USA
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000014081	A1	20000316	WO 1999-US537	19990111

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

DE 19841032	A1	20000316	DE 1998-19841032	19980909
CA 2340348	AA	20000316	CA 1999-2340348	19990111
AU 9921112	A1	20000327	AU 1999-21112	19990111
EP 1119558	A1	20010801	EP 1999-901410	19990111

R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL

BR 9913612	A	20011030	BR 1999-13612	19990111
JP 2002524455	T2	20020806	JP 2000-568839	19990111

PRIORITY APPLN. INFO.: DE 1998-19841032 A 19980909
WO 1999-US537 W 19990111

AB A process is described for continuous prodn. of anhydro sugar alcs. by continuous introducing of sugar alcs. and/or monoanhydro sugar alcs. into a reaction vessel and dehydration in the presence of an acid catalyst and solvent, preferably an org. solvent, in which the resultant reaction

products are sol. Water and the org. solvent having the dissolved reaction product are each continuously removed from the reaction chamber. The reaction product is sepd. from the removed solvent, which is recycled into the reaction vessel. The reaction product is optionally purified by distn. and/or recrystn. The purified reaction product obtained is particularly suitable as a starting product for producing polymers, and has a purity of at least 99.0 %. Thus, cContinuous process of sulfuric acid-catalyzed dehydration of sorbitol in xylene gave isosorbide in 79% yield.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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